LISTING OF CLAIMS

1. (Original) A method for image sensing comprising the acts of:

producing, from a photo detector, a plurality of detected electronic signals responsive to an optical image;

amplifying, with a column buffer amplifier, signals selected from the detected electronic signals to produce a plurality of amplified signals;

sampling, with a correlated double sampler, signals selected from the amplified signals to produce a plurality of sampled signals;

and

clamping, by a clamp circuit, at least one signal selected from the detected electronic signals and the sampled signals in response to a detecting of at least one over-saturation condition;

whereby image inversion is at least partially abated.

2. (Original) The method of claim 1 wherein

the photo detector comprises a photo diode.

3. (Original) The method of claim 1 wherein

the photo detector comprises a photo gate.

4. (Original) The method of claim 1 wherein

the clamp circuit is implemented in a technology selected from a list consisting of N-well CMOS process technology and of P-well CMOS process technology.

5. (Original) A method for enhancing a video image comprising the acts of:

sampling a plurality of image signals with a correlated double sampler to produce a plurality of sampled signals;

clamping, with a clamp circuit, signals selected from the image signals and the sampled signals during a reset phase of the correlated double sampler.

6. (Withdrawn) The method of claim 5 wherein
the clamp circuit limits a reset voltage.

7. (Original) The method of claim 5 wherein
the clamp circuit operates in conjunction with a column buffer amplifier comprising a source follower.

8. (Withdrawn) The method of claim 5 wherein
the clamp circuit operates in conjunction with a column buffer amplifier comprising a distributed pixel column amplifier.

9. (Withdrawn) The method of claim 8 wherein
the distributed pixel column amplifier provides to the column buffer amplifier a feedback selected from a list consisting of a differential feedback and a single-ended feedback.

10. (Original) A circuit comprising:
an image sensor array comprising:
a clamp circuit;
a column buffer amplifier;
and
a correlated double sampling circuit.

11. (Original) The circuit of claim 10 wherein
the image sensor array captures still images.

12. (Original) The circuit of claim 10 wherein
the image sensor array captures moving video images.

13. (Withdrawn) A method for processing a signal comprising:
producing a plurality of output luminance signals responsive to an incident light;

generating a first sample of one of the luminance signals at a first time and a second sample of the respective luminance signal at a second time;

producing a threshold passed signal output responsive to a condition of over-saturation by the incident light;

and

clamping the respective luminance signal sample during the first time responsive to the threshold passed signal.

14. (Withdrawn) The method of claim 13 wherein

the plurality of output luminance signals are produced by sensors arranged as an array of sensors having two dimensions.

15. (Withdrawn) The method of claim 14 further comprising the act of:

selecting a subset of luminance signals according to a dimensional direction in the array.

16. (Withdrawn) A circuit for providing a signal comprising:

a plurality of pixel cells having a plurality of output luminance signals responsive to an incident light;

a correlated double sampler operative to generate a first sample of one of the luminance signals at a first time and a second sample of the respective luminance signal sample at a second time;

a threshold detection circuit having a threshold passed signal output responsive to a condition of one of the pixel cells of being over-saturated by the incident light;

and

a clamp circuit wherein the clamp circuit clamps the respective luminance signal during the first time responsive to the threshold passed signal.

17. (Withdrawn) The circuit of claim 16 further comprising:

a plurality of per-column circuits that selects a subset of luminance signals.

18. (Withdrawn) The circuit of claim 17 wherein

the subset of luminance signals corresponds to a direction selected from a list consisting of a column in an image to which the plurality of pixel cells is responsive and a row in an image to which the plurality of pixel cells is responsive.

19. (Withdrawn) The circuit of claim 18 wherein

the plurality of per-column circuits has a greater cardinality than the subset of luminance signals.

20. (Withdrawn) A circuit for providing a signal comprising:

a means for producing a plurality of output luminance signals responsive to an incident light;

a means for generating a first sample of one of the luminance signals at a first time and a second sample of the respective luminance signal at a second time;

a means for producing an over-saturation signal output responsive to a condition of over-saturation by the incident light;

and

a means for clamping the respective luminance signal sample during the first time responsive to the over-saturation signal.

21. (Withdrawn) The circuit of claim 20 further comprising:

a means for selecting a subset of luminance signals.

22. (Withdrawn) The circuit of claim 21 wherein

the subset of luminance signals corresponds to a column in an image to which the circuit for providing a signal is responsive.

23. (Withdrawn) The circuit of claim 21 wherein

the subset of luminance signals corresponds to a row in an image to which the circuit for providing a signal is responsive.

24. (Original) In an image sensor that correlates a first sample of a first signal during a first interval after reset of a photo detector and a second sample of the first signal during a later interval to produce a luminance signal, a method for abating an error in the luminance signal due to excessively rapid slewing of the first signal during the first interval wherein the improvement comprises:

detecting that the first signal is slewing excessively rapidly during the first interval; and

limiting the value of the first sample;

whereby the image sensor produces an output of improved accuracy.

25. (Original) The method of claim 24 wherein:

the error is an image inversion due to over-saturation.

26. (Withdrawn) The method of claim 24 wherein:

the detecting is responsive to the first signal reaching the bounds of a predetermined threshold.